

In the claims:

For the Examiner's convenience, all pending claims are presented below with changes shown in accordance with the mandatory amendment format.

1. (Currently Amended) A method comprising:

~~performing a search for data channels in several multimedia channels in a cable network by:~~

~~eliminating from the search~~ one or more channels associated with at least one of analog media content and [[/or]] non-digital signal sources from a search for data channels, the one or more channels part of a plurality of multimedia channels in a cable network;

tuning a receiver of a broadband cable signal associated with a quadrature amplitude modulation (QAM) technique to a selected channel within the broadband cable signal;

temporarily activating adaptive equalizer logic in a QAM modulator to demodulate the selected channel according to a quadrature phase shift keying (QPSK) modulation technique to position a slicer in the QAM demodulator to an appropriate quadrant in an in-phase/quadrature (I/Q) constellation;

sweeping a carrier frequency of the receiver over a carrier loop bandwidth for the receiver to attempt to obtain a channel lock on the selected channel while the receiver is activated in order to demodulate the selected channel according to the QPSK modulation technique; and

if a channel lock is obtained and ~~,-determining whether~~ the selected channel is a data channel, ~~,-and if the selected channel is a data channel, then returning~~ activating the adaptive equalizer logic in the QAM modulator to demodulate the selected channel according to the QPSK technique.

2. (Currently Amended) A method according to claim 1, wherein the selected channel is a narrow-band channel within the broadband cable signal.

3. (Canceled)

4. (Currently Amended) A method according to claim 1, wherein tuning the receiver to [[a]] the selected channel comprises:

accessing a storage medium for a list of information channels within the broadband cable signal; and

selecting a channel from the list to which the receiver is tuned.

5-6. (Canceled)

7. (Previously Presented) A method according to claim 4, further comprising:  
selecting a next channel from the list of information channels if a channel lock could not be obtained;

repeating the activating and sweeping operations to attempt to obtain a channel lock on the next selected channel; and

repeating the foregoing operations until a data channel is identified.

8. (Previously Presented) A method according to claim 7, further comprising:  
updating the list of channels to promote the channel identified as a data channel to the first channel in the list.

9. (Canceled)

10. (Canceled)

11. (Currently Amended) A computing system comprising:  
a storage medium including a plurality of executable instructions; and  
a control unit, coupled to the storage medium, to execute at least a subset of the plurality of executable instructions to implement a data channel detection agent, wherein the data channel detection agent performs a search for data channels in several multimedia channels in a cable network by:

~~eliminating from the search one or more~~ channels associated with at least one of analog media content and ~~[[/or]]~~ non-digital signal sources from the search for the data channels;

tuning ~~[[es]]~~ a receiver of a broadband cable signal associated with a quadrature amplitude modulation (QAM) technique to a selected channel within the broadband cable signal;

temporarily activating~~[[es]]~~ adaptive equalizer logic in a QAM modulator to demodulate the selected channel according to a quadrature phase shift keying (QPSK) modulation technique to position a slicer in the QAM demodulator to an appropriate quadrant in an in-phase/quadrature (I/Q) constellation;

sweeping causes a carrier frequency of the receiver ~~to be swept~~ over a carrier loop bandwidth for the receiver to attempt to obtain a channel lock on the selected channel while the receiver is activated in order to demodulate the selected channel according to the QPSK modulation technique; and

if a channel lock is obtained, ~~determines whether the selected channel is a data channel;~~ and if the selected channel is a data channel, ~~then returning~~ activating the adaptive equalizer logic in the QAM modulator to demodulate the selected channel according to the QAM modulation technique.

12. (Previously Presented) A computing system according to claim 11, wherein the data channel detection agent accesses a storage medium for a list of information channels within the broadband cable signal, and selects one of the channels within which to find system information.

13. (Canceled)

14. (Previously Presented) A computing system according to claim 12, wherein the channel detection agent steps to a next channel in the list if the demodulated channel is not a data channel.

15. (Previously Presented) A computing system according to claim 14, wherein the channel detection agent updates the list to promote a channel identified as a data channel to a first channel in the list.

16. (Canceled)

17. (Currently Amended) A computing system according to claim 11, wherein the channel detection agent further performs operations comprising~~[[:]]~~ extracting information from the demodulated channel data to determine whether the selected channel is a data channel or a digital multimedia channel.

18. (Original) A computing system according to claim 11, wherein the computing system is a cable modem.

19. (Currently Amended) A machine accessible storage medium comprising a plurality of executable instructions which, when executed by an accessing machine, cause the machine to implement a channel detection agent to:[,]

eliminate, from a search for data channels in several multimedia channels in a cable network, channels associated with at least one of analog and log media content and[~~/or~~] non-digital signal sources;

tune a receiver of a broadband cable signal associated with a quadrature amplitude modulation (QAM) technique to a selected channel within the broadband cable signal;

temporarily activate[~~s~~] adaptive equalizer logic in a QAM modulator to demodulate the selected channel according to a quadrature phase shift keying (QPSK) modulation technique to position a slicer in the QAM demodulator to an appropriate quadrant in an in-phase/quadrature (I/Q) constellation;

~~sweep~~ cause a carrier frequency of the receiver ~~to be swept~~ over a carrier loop bandwidth for the receiver to attempt to obtain a channel lock on the selected channel while the receiver is activated in order to demodulate the selected channel according to the QPSK modulation technique; and

if a channel lock is obtained, ~~determine[~~s~~]~~ whether the selected channel is a data channel; and if the selected channel is a data channel, ~~then returning~~ activate the adaptive equalizer logic in the QAM modulator to demodulate the selected channel according to the QAM modulation technique.

20. (Previously Presented) A machine accessible storage medium according to claim 19, wherein the instructions to implement the data channel detection agent include instructions to access a storage medium for a list of information channels within the broadband cable signal, and to select one of the channels within which to search for system information.

21. (Canceled)

22. (Previously Presented) A machine accessible storage medium according to claim 20, wherein the instructions to implement the channel detection agent include instructions to step the receiver to a next channel in the list if the demodulated channel is not a data channel.
23. (Canceled)
24. (Currently Amended) A machine accessible storage medium according to claim 19, wherein the instructions to update one or more operating characteristics of the cable modem include instructions to:
- produce demodulated channel data carried over the selected channel; and
  - extract information from the demodulated channel data to determine whether the selected channel is a data channel or a digital multimedia channel.
25. (Currently Amended) The method of claim 1, wherein the ~~operation of~~ determining if the selected channel is a data channel comprises:
- returning the temporarily modified receiver parameters to demodulate the selected channel according to the first modulation technique to produce demodulated channel data;
  - extracting information from the demodulated channel data to determine whether the selected channel is a data channel or a digital multimedia channel.
26. (Previously Presented) The method of claim 25, wherein the information that is extracted comprises a program identification field (PID) in a DOSCIS protocol header.
- 27-29. (Canceled)